

REMARKS/ARGUMENTS

Claims 1, 5-6, 24-25, 27, 29-32, 34 and 36 have been amended herein. Claims 7-23 have been withdrawn as directed toward a non-elected invention. Claims 1-6 and 24-36 are currently pending in this application, and are at issue herein.

§ 112 Claim Rejections

Claims 32-34 stand rejected under § 112, second paragraph, as allegedly being indefinite. Specifically, the Examiner takes issue with the first and second cameras recited in claims 32 and 34, as the parent claim (claim 24) claims only one camera.

In response, Applicants have amended claim 24 to recite "a camera system", and have amended the appropriate dependent claims accordingly. Thus, Applicants submit it is clear how the "camera system" in claim 24 can become first and second cameras, as recited in claims 32-34.

Accordingly, Applicants submit that the § 112 claim rejections have been overcome, and respectfully request withdrawal thereof.

§ 102 Claim Rejections

Claims 1, 5-6, 24-26, 28 and 30 stand rejected under § 102(e) as anticipated by U.S. Patent No. 6,237,647 to Pong et al. ("Pong"). Applicants respectfully traverse the claim rejections for at least the following reasons.

Independent claims 1, 5-6 and 24 each recite that image information of a customer is obtained, and further recite that an attribute group of the customer is determined on the basis of the obtained image and information not based on a particular individual. Pong neither discloses nor suggests these limitations.

Initially, Pong does not determine any attribute of a customer. The system described in Pong is an automatic refueling station which detects the arrival of a vehicle and identifies the vehicle and the customer associated with the vehicle via information stored on an identification transponder, or tag, affixed to the vehicle windshield. (Pong, Abstract, lns. 3-7; col. 1, lns. 62-67; col. 6, lns. 32-37). Pong discloses identifying the vehicle by its year, make and model and/or vehicle identification number. (Pong, col. 6, lns. 40-42). Pong discloses that the customer can be identified by a preassigned customer account number. (Pong, col. 6, lns. 42-43). Retrieval of identifying information from the transponder is discussed in Pong at column 6, line 32 to column 7, line 17. This discussion in Pong is devoid of any mention of obtaining an image of a customer.

Pong includes one isolated disclosure, found at column 2, lines 44-46, of customer facial recognition. However, this isolated disclosure in Pong simply indicates that the vision system therein can perform facial recognition which can be used to confirm operator identification information retrieved from the windshield transponder. However, in a discussion of the customer information, as noted above from column 6, line 32 to column 7, line 17, Pong includes no mention that such information includes an image of the customer.

Presumably, the facial images that are allegedly obtained in Pong are compared against facial images previously stored in a database, perhaps on the transponder, to detect a match. However, except for the isolated disclosure at column 2, lines 44-46, Pong is silent as to how its facial recognition system actually works. In any event, Applicants' claimed invention is not a facial recognition system.

Further, Pong includes no disclosure or suggestion of determining an attribute group of a customer from both image information of the customer and information not based on a particular individual. To the extent that Pong discloses customer facial recognition, Pong's invention must recognize the customer's face based on a particular individual because facial recognition could not be conducted without information of a particular individual.

The present invention, on the other hand, determines an attribute group based on both the customer image and information not based on a particular individual. Support for this limitation can be found in the originally filed application at paragraphs [0139]-[0142]. For example, the present application teaches that an attribute may be determined by initially referring to image data of a customer to determine a height and then determining an age bracket from the determined height. Also, image data can be used to determine the customer's appearance, such as whether the customer is wearing a skirt, makeup, has long hair, etc., and then determining the customer's sex from these decisions. Other attribute groups that can be determined are the time of day the customer normally shops, whether the customer shops alone or with others, etc. Thus, the present invention, as recited in independent claims 1, 5-6 and 24, determines an attribute group of a customer from both the image information obtained and information not based on a particular individual. By determining attributes of the customers, items can be associated with those certain attributes, and strategies can be developed to increase sales of various items.

In contrast, Pong discloses accessing only one transponder which is on the vehicle to be refueled, and only information in that transponder is retrieved. Thus, Pong neither obtains an image of the customer, nor determines an attribute of the customer from that image and other information not based on a particular individual. Pong only reads information from the

transponder and uses that to access vehicle and customer information. While Pong includes an isolated disclosure of facial recognition, Pong is silent as to how the facial recognition actually works. Presumably such facial recognition is used to identify the individual and not used to determine an attribute of that individual. As previously noted, such identification can only occur if the individual's image is previously stored in a database. There is simply no disclosure or suggestion in Pong of determining an attribute group based on both the customer image and information not based on a particular individual.

Accordingly, for at least the above-identified reasons, independent claims 1, 5-6 and 24 are believed allowable over Pong.

Dependent claims 25-26, 28 and 30 depend cognately from independent claim 24, and add features which further remove the present invention from the prior art. Given at least the distinctions identified above, the dependent claims are believed allowable over the prior art and a separate discussion of the dependent claims will not be belabored for the sake of brevity.

§ 103 Claim Rejections

Claim 27 stands rejected under § 103(a) as obvious over Pong in view of U.S. Patent No. 6,332,139 to Kaneko et al. ("Kaneko"). Applicants respectfully traverse the Examiner's rejections for at least the following reasons.

Claim 27 depends from independent claim 24. The deficiencies of Pong with respect to independent claim 24 have been previously discussed. Kaneko neither discloses nor suggests these deficiencies. Kaneko discloses determining a person's gender and/or age from facial recognition. Accordingly, claim 27 is believed allowable over the prior art.

§ 103 Claim Rejections

Claim 29 stands rejected under § 103(a) as obvious over Pong. Applicants respectfully traverse the claim rejections for at least the following reasons.

Claim 29 depends from independent claim 24. The deficiencies of Pong with respect to independent claim 24 have been previously noted. Thus, it is submitted that claim 29 depends from an allowable base claim, and is thus allowable for at least that reason.

§ 103 Claim Rejections

Claims 2-4 and 31-36 stand rejected under § 103(a) as obvious over Pong in view of U.S. Patent No. 5,331,544 to Lu et al. ("Lu"). Applicants respectfully traverse the claim rejections for at least the following reasons.

Claims 2-4 and 31-36 depend cognately from independent claims 1 and 24, respectively. The deficiencies of Pong with respect to independent claims 1 and 24 have been previously noted. Lu neither discloses nor suggests these deficiencies. Lu discloses use of a facial recognition system to track purchasing activity. Accordingly, claims 2-4 and 31-36 are believed allowable over the prior art.

Conclusion

Applicants' invention is a novel computer-readable medium and management system which includes features neither disclosed nor suggested in the prior art. Applicants' invention acquires both image information of a customer and data information of an item purchased by a customer, and correlates that information for recording in a database. In addition to obtaining image information of a customer, the present invention determines an attribute group of the

customer from the image information obtained and also from information not based on a particular individual. The prior art neither discloses nor suggests these features.

Thus, for at least the above-identified reasons, Applicants submit that claims 1-6 and 24-36 are allowable over the prior art of record. Reconsideration of pending claims 1-6 and 24-36, allowance and passage to issue are respectfully requested. Early notification to that effect is respectfully requested.

It is believed that this Response requires no fee. However, if a fee is required for any reason, the Commissioner is hereby authorized to charge Deposit Account No. 02-4800 the necessary amount.

Should any issues remain, the Examiner is invited to contact the undersigned at the number listed below to advance prosecution of the case.

Respectfully submitted,

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Bryan H. Opalko
Registration No. 40,751

BUCHANAN INGERSOLL & ROONEY PC
20th Floor, One Oxford Centre
301 Grant Street
Pittsburgh, Pennsylvania 15219-1410
Phone: 412-562-1893
Fax: 412-562-1041
e-mail: bryan.opalko@bipc.com
Attorneys for Applicant(s)